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Effects of nicotine on ureteric motility

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The effects of nicotine on the ureteric motility of the sheep were studied in vitro. The ureters were obtained early in the morning from the local abattoir. Ureteral strips were suspended vertically in 10 ml organ baths filled with De-Jalon solution maintained at 37° C and gassed with 95% oxygen and 5% carbon dioxide. The ureter has adrenergic and cholinergic innervations. Sensory nerves, however, may have important functions in ureteric motility regulation. It's motility is affected by these innervations and prostaglandins. Indomethacin (10<sup>-5</sup> M) inhibited and finally stopped rhythmich motility. ACh (10<sup>-8</sup> - 10<sup>-4</sup> M) increased dosedependantly both frequency and amplitude of contractions. Nicotine (10<sup>-6</sup> -10<sup>-3</sup> M) caused stimulatory effect on frequency and amplitude of contractions.

Nicotine may act on the nicotinic receptors or/and produces stimulating effects in the adrenergic nerve terminals on ureters.

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